

WHAT IS CLAIMED IS:

1. A method of computerized generation of a derivative value enhanced document from a patent document,
5 comprising the steps of:

processing the patent document, comprising:

selecting a segment of the patent document;

processing the selected segment, including:

10 extracting at least two portions of
information from the selected segment of the
document; and

converting at least one of the extracted
portions of information into at least one form;

15 combining the converted portions of information into a
derivative segment of the patent document so as to provide
value enhanced representation of the segment; and

forming the derivative document by combining the
derivative segment and one of the patent document and a part
thereof.
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2. A method as described in claim 1, wherein the step
of combining the converted portions comprises establishing
links between the portions of information.

25 3. A method as described in claim 1, wherein the step
of converting comprises converting at least two of the
extracted portions of information into forms so that each
form comprises a subset of elements corresponding to sub-
portions of the extracted portion of information.

30 4. A method as described in claim 3, wherein the step
of converting further comprises a step of selecting a subset
of elements for each of the sets of elements and

establishing correspondence between the elements of different subsets.

5 5. A method as described in claim 4, further comprising one or more of the following:

displaying the selected subsets of elements on a computer screen; and

10 displaying the selected subsets of elements on a computer screen in combination with other elements of the sets.

6. A method as described in claim 1, wherein the step of converting the extracted portions of information comprises a step selected from the list consisting of:

15 converting the portions of information into at least two forms;

converting the portions of information so that at least one form of each portion is the same for all converted portions;

20 converting the portions so that at least one form of each portion differs from forms of other portions; and

converting the portions so that different portions are converted into different forms.

25 7. A method as described in claim 1, wherein the step of converting the portions comprises converting the portions into a format selected from the list consisting of graphical, text, HTML, SGML, XHTML, XML, audio, video, and multi-media formats.

30 8. A method as described in claim 1, wherein the step of forming the derivative document comprises a step selected from the list consisting of:

forming the document so that the derivative segment is replacing the selected segment of the patent document;

forming the document so that the derivative segment is supplementing the patent document;

5 forming the document so that the derivative segment is supplemented by a segment of the patent document; and

forming the document so that the derivative document is the derivative segment of the patent document.

10 9. A method as described in claim 1, further comprising a step of performing one or more of the following:

storing data obtained in at least one of the steps in a database;

15 sending data obtained in at least one of the steps over a network;

compressing data obtained in at least one of the steps;

displaying one of the derivative document and the derivative segment on a computer screen.

20 10. A method as described in claim 1, wherein the step of processing the document comprises distributed processing of the patent document in a network environment performed by using processing power of more than one computer.

25 11. A method as described in claim 10, wherein the step of distributed processing comprises the steps of initial processing of the document performed on a server side and final processing performed on a client side.

30 12. A derivative document generated according to the method as described in claim 1.

13. A method of computerized generation of a database,
comprising the steps of:

(a) providing a patent document;

(b) performing the steps of the method as described in
5 claim 1;

(c) storing data obtained in at least one of the steps
of the step (b) in a database;

(d) repeating the steps (a) to (c) required number of
times.

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14. A database obtained according to the method as
described in claim 13.

15. A method of computerized generation of a
15 derivative segment of a patent document, comprising the
steps of:

selecting a segment of the patent document;

processing the selected segment, including:

20 extracting at least two portions of
information from the selected segment of the
document; and

converting at least one of the extracted
portions of information into at least one form;
and

25 combining the converted portions of information into
the derivative segment of the patent document so as to
provide value enhanced representation of the segment.

30 16. A method as described in claim 15, wherein the
step of combining the converted portions comprises
establishing links between the portions of information.

17. A method as described in claim 15, wherein the step of converting comprises converting at least two of the extracted portions of information into forms so that each form comprises a set of elements corresponding to sub-
5 portions of the extracted portion of information.

18. A method as described in claim 17, wherein the step of converting further comprising a step of selecting a subset of elements for each of the sets of elements and
10 establishing correspondence between the elements of different subsets.

19. A method as described in claim 18, further comprising one or more of the following:

15 displaying the selected subsets of elements on a computer screen; and

displaying the selected subsets of elements on a computer screen in combination with other elements of the sets.

20 20. A method as described in claim 15, wherein the step of converting the extracted portions of information comprises a step selected from the list consisting of:

25 converting the portions of information into at least two forms;

converting the portions of information so that at least one form of each portion is the same for all converted portions;

30 converting the portions so that at least one form of each portion differs from forms of other portions; and

converting the portions so that different portions are converted into different forms.

21. A method as described in claim 15, wherein the step of converting the portions comprises converting the portions into a format selected from the list consisting of graphical, text, HTML, SGML, XHTML, XML, audio, video, and multi-media formats.

22. A method as described in claim 15, wherein the step of processing the segment comprises distributed processing of the segment in a network environment performed by using processing power of two or more computers.

23. A method as described in claim 22, wherein the step of distributed processing comprises the steps of initial processing of the segment performed on a server side and final processing of the segment performed on a client side.

24. A derivative segment of a patent document generated according to the method as described in claim 15.

25. A computerized system for generation a derivative value added document from a patent document, comprising:

means for processing the document, comprising:

means for selecting a segment of the patent document;

means for processing the selected segment, including:

means for extracting at least two portions of information from the selected segment of the document;

and

means for converting at least one of the extracted portions of information into at least one form;

means for combining the converted portions of information into a derivative segment of the patent document; and means for forming the derivative document by combining the derivative segment and one of the patent document and a part thereof.

26. A computerized system as described in claim 25, further comprising means for sending the derivative document over a network.

27. A computerized system as described in claim 25, wherein means for processing the patent document comprises means for distributed processing of the document in a network, wherein processing power of two or more computers is used.

28. A method as described in claim 1, wherein the step of selecting the segment comprises selecting a claim section of the patent document.

29. A method as described in claim 28, wherein the step of processing the selected segment comprises the following step, which is performed before the step of extracting portions of information:

when multiple dependent claims are present in the claim section, transforming multiple dependent claims into single dependent claims so that the number of single dependent claims generated from each multiple dependent claim is equal to the number of claims being referred to in the multiple dependent claim.

30. A method as described in claim 29, further comprising the step performing one of the following:

adding single dependent claims generated from multiple dependent claims to the end of original set of claims; and
inserting claims generated from a multiple dependent claim into original set of claims immediately after the
5 multiple dependent claim, and re-numbering of claims starting from the multiple dependent claim and to the end of claim section.

31. A method as described in claim 29, wherein the
10 step of converting comprises:
sorting single dependent claims by claim numbers to which claims refer to; and
interchanging positions of any two neighboring claims, the preceding claim and the succeeding claim, if they meet
15 the following requirements:
both claims are dependent claims and refer to different claims; and
succeeding claim does not refer to the preceding claim.

32. A method as described in claim 28, wherein the
20 step of extracting the information comprises extracting first and second portions of information, the portions of information being claim dependency and text of claims respectively.

33. A method as described in claim 32, wherein the
25 step of converting the portions of information comprises the steps of:

converting the first portion of information into a
30 first form, the first form being represented in a graphical format, comprising a set of graphical elements, each element corresponding to an individual claim; and

converting the second portion of information into a second form, comprising a set of elements, each element being a text of an individual claim.

5 34. A method as described in claim 33, wherein the step of converting the portions of information further comprises the steps of:

selecting a first subset of elements from the set of elements of the first format and a second subset of elements
10 from the set of elements of the second format; and

establishing correspondence between the elements of the first and second subsets using claim dependency.

15 35. A method as described in claim 34, wherein the step of selecting first and second subsets comprises customized selection of the corresponding elements.

20 36. A method as described in claim 34, wherein the steps of selecting the subsets and establishing correspondence between the subsets are performed so as to provide one to one correspondence between the elements of the first and second subsets, wherein corresponding elements from the different subsets represent the same claim.

25 37. A method as described in claim 35, wherein the step of selecting the subsets comprises the step selected from the list consisting of:

30 selecting the first subset comprising only one element of the first form, and the second subset comprising the corresponding element of the second form;

selecting the first subset comprising only one element of the first form, and the second subset comprising first and second elements of the second form, wherein the first

element corresponds to the selected element of the first form, and the second element is the element on which the first element refers to according to claim dependency;

5 selecting the first subset comprising elements of the first form corresponding to independent claims only, and the second subset comprising elements of the second form corresponding to the selected elements of the first form;

10 selecting the first subset comprising elements of the first form corresponding to an independent claim and all the dependent claims referred thereto only, and the second subset comprising elements of the second form corresponding to the selected elements of the first form; and

15 selecting the first subset comprising an independent claim only, and the second subset comprising elements of the second form corresponding to the selected independent claim and all dependent claims referred thereto.

38. A method as described in claim 34, further comprising one or more of the following:

20 displaying the selected subsets of elements on a computer screen; and

displaying the selected subsets of elements on a computer screen in combination with other elements of the sets.

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39. A computer program product for generation a derivative document from a patent document, comprising:

30 a computer usable medium having computer readable program code means embodied in said medium for causing generation of the derivative document, said computer program product having:

computer readable program code means for causing said computer to perform the steps of the method as described in claim 1; and

5 computer readable program code means for causing said computer to perform one or more of the following:

storing data obtained in at least one of the steps of the method as described in claim 1 in a database;

retrieving data obtained in at least one of the steps of the method as described in claim 1 from a database;

10 sending data obtained in at least one of the steps of the method as described on claim 1 over a network; and

displaying the derivative document on a computer screen.

15 40. A computer program product for generation a derivative segment of a patent document, comprising:

20 a computer usable medium having computer readable program code means embodied in said medium for causing generation of the derivative section, said computer program product having:

computer readable program code means for causing said computer to perform the steps of the method as described in claim 15; and

25 computer readable program code means for causing said computer to perform one or more of the following:

storing data obtained in at least one of the steps of the method as described in claim 15 in a database;

retrieving data obtained in at least one of the steps of the method as described in claim 15 from a database;

30 sending data obtained in at least one of the steps of the method as described in claim 15 over a network; and

displaying the derivative section on a computer screen.